WO 2005/075734 PCT/FI2005/000071

CLAIMS

- 1. A press belt (1) made from an elastomer material and forming a closed loop, the belt having an inner surface (2) and an outer surface (3) and three layers of reinforcement yarns (7', 5', 6') arranged inside the elastomer material, an innermost yarn layer (5) closest to the inner surface (2) being formed by longitudinal and transversely adjacent reinforcement yarns (5') of the press belt, and a middle yarn layer (6) being formed by transverse longitudinally adjacent reinforcement yarns (6') of the press belt (1), **c** h a r a c t e r i z e d in that an outermost yarn layer (7) closest to the outer surface of the press belt (1) is formed by longitudinal and transversely adjacent reinforcement yarns (7') of the press belt (1), which absorb energy and are restored from deformation with delay in connection with deformation.
- 2. A press belt as claimed in claim 1, characterized in that the material and/or structure of the reinforcement yarns (7') of the outermost yarn layer (7) are more flexible than the reinforcement yarns (6') of the middle yarn layer (6).
- 3. A press belt as claimed in claim 1 or 2, **c h a r a c t e r i z e d** in that the material and/or structure of the reinforcement yarns (7') of the outermost yarn layer (7) are more flexible than the reinforcement yarns (5', 6') of the inner yarn layers (5, 6) in such a manner that in connection with deformation of the press belt (1) they absorb more energy and are restored from the deformation more slowly than the yarns (5', 6') of the other yarn layers (5, 6).
- 4. A press belt as claimed in claim 1 or 2, **characterized** in that the material and/or structure of the reinforcement yarns (5') of the innermost yarn layer (5) are more flexible than the reinforcement yarns (7') of the outermost yarn layer (7).
- 5. A press belt as claimed in any one of claims 1 to 4, c h a r a c terized in that the reinforcement yarns (7') of the outermost yarn layer (7) are multifilament yarns twisted at a high twist level.
- 6. A press belt as claimed in any one of claims 1 to 5, **c** h a r a c **t e r i z e d** in that the reinforcement yarns (5', 6') of some inner yarn layer (5, 6) being multifilament yarns, the reinforcement yarns (7') of the outermost yarn layer (7) are twisted at a higher twist level than the former.

WO 2005/075734 PCT/FI2005/000071

7

- 7. A press belt as claimed in any one of the preceding claims, **characterized** in that the outer yarn layer (7) is composed of a plurality of mutually parallel separate reinforcement yarns (7').
- 8. A press belt as claimed in any one of claims 1 to 4, characterized in that the outermost yarn layer (7) is composed of one or more adjacent reinforcement yarns (7') twisted spiral-like in the transverse direction of the press belt (1).
- 9. A press belt as claimed in any one of the preceding claims, **characterized** in that at least a part of the inner yarn layers (5; 6) is composed of a plurality of mutually parallel separate reinforcement yarns (5'; 6') in the same layer.
- 10. A press belt as claimed in any one of the preceding claims, **characterized** in that the innermost yarn layer (5) is composed of one or more spiral-like adjacent reinforcement yarns (5') twisted in the transverse direction of the press belt (1).